

# Special Applications: Fuel-Filter

## LATIOHM 57-05 PDO1 G/15

- Semi-aromatic PA
- Glass fibre reinforced

## LATIOHM 66-06 PDO3 G/20

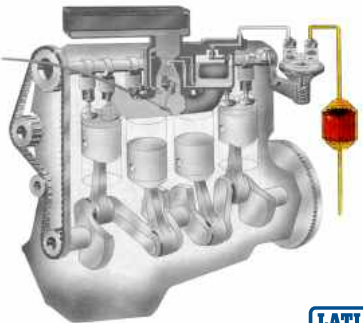
- PA 66 based compound
- Glass fibre reinforced

## LATIOHM 73-09 PDO1 G/20

- POM based compound
- Glass fibre reinforced

## KEY PROPERTIES:

- Good mechanical properties
- Good dissipative properties
- Good chemical resistance
- Excellent resistance to petrol unleaded petrol and diesel fuel
- Low fuel permeability



Fuel filters are fundamental to the performance of an engine. Thermoplastic-shelled fuel filters, in place of stainless steel, enable manufacturers to take advantage of the widely known benefits of plastic, including weight savings, cost savings, design freedom and recyclability.

Within LATI's product range there are products that, due to their outstanding properties, are ideal for applications working in harsh environments.

LATIOHM, based on different resins, are semi-conductive or electrically dissipative compounds having surface resistivity values from 10 to  $10^{12}$  Ohm. This means that such compounds avoid the build up of static charges on the surface of the finished part, which can generate sparks and trigger an explosion in a potentially explosive atmosphere (in this specific case due to the presence of flammable substances such as petrol, diesel-fuel and so on).

Such products are exceptional for their chemical resistance to fuel and low hydrocarbon permeability, high-temperature performance and superior impact strength even at low temperatures. Moreover, thanks to their good mechanical properties they can withstand very high pressures (filters are tested to 15/20 atm).

Such technology could easily be transferred to powerplants used in lorry, public-transport, marine, power-generation and compressor applications, to name but a few.

LATI is willing to share with you its expertise in this field, and its T.S. and R&D Teams are at your complete disposal to analyse your requirements and collaborate on project developments.



PROPERTIES (typical values)	Standards	Units (SI)	LATIOHM 66-06 PD03 G/20	LATIOHM 73-09 PD01 G/20	LATIOHM 57-05 PD01 G/15	
<b>Physical</b>						
Base resin			PA 66	POM	SEMI-AROMATIC PA	
Density	23°C	ISO 1183	g/cm <sup>3</sup>	1.33	1.54	1.34
Linear shrinkage during moulding (plaque 120 x 80 x 3.5 mm)	along flow	LATI	%	0.20 ÷ 0.40	0.80 ÷ 1.20	0.20 ÷ 0.40
	across flow			1.00 ÷ 1.40	1.50 ÷ 1.90	0.60 ÷ 1.00
<b>Mechanical</b>						
Izod - Impact strength (notched) (specimen 63.5 x 12.7 x 3.2 mm)	23°C	ASTM D256-A	J/m	60	55	52
Charpy - Impact strength (unnotched) (specimen 80 x 10 x 4 mm)	23°C	ISO 179	kJ/m <sup>2</sup>	50	20	34
Charpy - Impact strength (notched) (specimen 80 x 10 x 4 mm)	23°C	ISO 179	kJ/m <sup>2</sup>	5.3	5	5.3
Tensile elongation at break	5 mm/min	ISO 527 (1)	%	2.6	1.5	1.8
Tensile strength at break	5 mm/min	ISO 527 (1)	MPa	170	110	190
Tensile Modulus	1 mm/min	ISO 527 (1)	MPa	12000	11000	14000
<b>Thermal</b>						
Vicat - Softening point (50°C/h)	49 N	ISO 306	°C	254	153	228
HDT - Heat Distortion Temperature	0.45 MPa	ISO 75	°C	257	164	273
	1.82 MPa			243	163	258
<b>Electrical</b>						
Electrical resistivity	Surface	ASTM D 257	ohm	1E5	2E3	4E3
	Volume		ohm•cm	1E4	5E3	5E3

**Diesel-fuel filter in  
LATIOHM 66-06 PD03 G/20**



This document contains information based on average values as obtained from the results of laboratory tests and observations made on our materials. Tested materials were injection moulded, used in their natural colour, and conditioned in compliance with Standard ASTM D 618, procedure A (40 h - 23°C - 50%R.H.). These data refer to our best technical and scientific knowledge at the moment of testing and cannot be used as a basis for the development of applications.

For a better assessment of the materials, you are kindly requested to contact our technical or commercial offices, which are at your disposal and will supply detailed information on the most suitable characteristics for the intended use. With reference to DPR n. 224 dated May 24, 1988 issued in accordance with EC Guide-lines 85/374, LATI Industria Termoplastici S.p.A. declines all responsibility arising from an improper use of the products described in this document.